CALIFORNIA ENERGY COMMISSION
Energy Management Control System
McDonald's Restaurants Project Summary

Project Description: McDonald's Corporation operates over 200 restaurants in California with an estimated peak demand of over 20 megawatts. Approached by Project Partner Energy Savings Management Systems, nineteen McDonald's facilities indicated interest in installing energy management control equipment with incentives offered through the California Energy Commission's Peak Load Reduction Program.

The installation of an energy management control system provided the restaurant owners with the ability to reduce energy consumption throughout the year and also offered the ability to respond to external alerts to reduce demand. To provide year round energy savings, the energy management control systems were programmed to reduce lighting levels and increase dining area temperatures to keep each restaurant under a predefined demand threshold.

Funding Summary: The Energy Commission provided incentives in the amount of $266,000, achieving an estimated savings of 178.6 kilowatts.

Project Results: During a demand response condition, the energy management control system automatically reduces the demand threshold by 10%. The system then uses the predefined business rules to automatically adjust lighting and HVAC settings to the lower demand setting. McDonald's reports an average permanent demand reduction of 8.1%, combined with the ability to shed an additional 8.0% when conditions warrant further load reduction.

Lessons Learned: McDonald's participants report the systems have exceeded restaurant owners' expectations, and they are experiencing a positive cash flow as a result of the equipment installation. In addition, neither the owners nor their customers have complained about the lighting or indoor-temperature during system testing.

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